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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/719,538	06/13/2001	Yoshihiro Hashizume	200719US3PCT	4080
22850	7590	01/14/2004	EXAMINER	
OBLON, SPIVAK, MCCLELLAND, MAIER & NEUSTADT, P.C. 1940 DUKE STREET ALEXANDRIA, VA 22314			FORD, JOHN K	
			ART UNIT	PAPER NUMBER
			3753	

DATE MAILED: 01/14/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/719,538

Examiner

FORD

Applicant(s)

Hashizume et al.

Art Unit

3743

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12/1/03 (RCE)
- 2a) ☒ This action is FINAL. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 12, 13, 24-28 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 12, 13, 26-28 is/are rejected.
- 7) ☒ Claim(s) 24, 25 is/are objected to.
- 8) ☐ Claims _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are objected to by the Examiner.
- 11) ☒ The proposed drawing correction filed on 8/20/03 is: a) ☒ approved b) ☐ disapproved.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

- 15) ☐ Notice of References Cited (PTO-892)
- 16) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 17) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 14

- 18) ☐ Interview Summary (PTO-413) Paper No(s) _____
- 19) ☐ Notice of Informal Patent Application (PTO-152)
- 20) ☐ Other: _____

Applicant's August 28, 2003 amendment has been entered pursuant to the filing of an RCE on December 1, 2003. As stated in the advisory action mailed October 6, 2003 the proposed amendments of August 28, 2003 were to be entered for purpose of appeal and that the translations of the Japanese prior art supplied by Applicant, as understood by the Examiner, served to reinforce the Examiner's position by contradicting counsel's arguments. Nothing has changed here. Nonetheless it is still the Examiner's position that claims 24 and 25 would be allowable if rewritten in independent form for the reasons previously articulated.

The remainder of the claims are rejected for the reasons previously stated.

Applicant's proposed drawing correction to legend Figure 17 as "PRIOR ART" is approved.

The 35 U.S.C. 112, second paragraph problem has been overcome.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 12,13 and 26-28 are rejected under 35 U.S.C. 103(a) as being unpatentable over the combined teachings of applicant's admitted prior art Figure 17 or Figure 3 of Ueda and Figure 8 of Noguchi (4,698,980).

Applicant's admitted prior art is discussed on page 1, line 17 – page 4, line 12 and that explanation is incorporated here by reference. Ueda (Figure 3) shows substantially the same relationship between air mix door position and blow out temperature that applicant has apparently independently discovered in Figure 17.

Figure 8 of Noguchi shows a rotary actuator shaft 6 with a rotary member 107 having a pin 109 cooperating with a cam mechanism 50 connected to an air mix door. Cam slots 117a and 117b diverge in the manner claimed in claims 12 and 13.

To have shaped the cam slots 117a and 117b of Noguchi Figure 8 as taught in col. 3 lines 32-42 of Noguchi (with respect to the species of Figures 2-6) to permit a linear output of air mix door opening cross-section as function of rotary angle of the actuator 2 to improve the accuracy of controlling the ratio of cold and hot air mixed would have been obvious to one of ordinary skill.

Claim 12, 13 and 26-28 are rejected under 35 U.S.C. 103(a) as being unpatentable over the prior art as applied to claim 12, 13 and 26-28 above, and further

in view of any one of JP 6-270,644 or Stevenson or Vonhausen or JP 58-81113 or JP 61-88807.

Each of these references teaches the non-linear relationship between actuator position and temperature output and uses some means, mechanical or electrical, to compensate for the non-linearity to permit the actuator to deliver a linear temperature output as a function of actuator position (despite the valve non-linearity). This is highly desirable since it increases the controllability of the system greatly. Each of these references reinforces the Examiner's argument made above that one of ordinary skill would have had all of the requisite motivation to have profiled cam slots 117a and 117b of Noguchi to produce linear output of temperature as a function of actuator position notwithstanding the inherently non-linear behavior of an air-mix door valve of the flap-type.

Claims 24 and 25 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

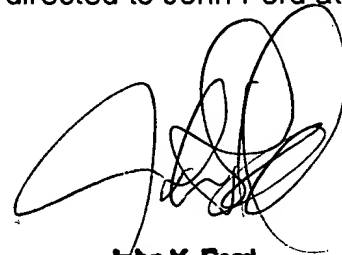
All claims are drawn to the same invention claimed in the application prior to the entry of the submission under 37 CFR 1.114 and could have been finally rejected on the grounds and art of record in the next Office action if they had been entered in the application prior to entry under 37 CFR 1.114. Accordingly, **THIS ACTION IS MADE**

FINAL even though it is a first action after the filing of a request for continued examination and the submission under 37 CFR 1.114. See MPEP § 706.07(b).

Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

Any inquiry concerning this communication should be directed to John Ford at telephone number 703-308-2636.



John K. Ford
Primary Examiner